

ABSTRACT OF THE DISCLOSURE

A method and apparatus for manipulating the surface of a sample including a cantilever, a first tip mounted on the cantilever, and a second tip mounted on the cantilever, the first and the second tip being configured to combine to form an imaging probe and to separate to form a manipulation probe. The first and second tips are configured to form a first position characterized in that the tips combine to form an imaging tip and the first and the second tip are configured to form a second position characterized in that the tips separate to manipulate particles on a surface of a sample. The tips can be configured to form the first position when a voltage is applied across the tips, and preferable extend downwardly from the cantilever substantially perpendicular thereto.